

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims:

1. (currently amended) A system for managing coherent data access in through multiple data processing devices using common data paths nodes, comprising:

a first data processing system ~~comprising a memory~~, wherein said memory ~~comprises a cacheable coherent memory space forming a first node~~, in which the first data processing system includes a first bridge and a memory local to the first node, wherein the memory stores cacheable data having coherency; and

a second data processing system ~~communicatively coupled to said first data processing system~~, said second data processing system comprising at least one bridge, wherein said bridge is operable to perform an ~~uncacheable remote access to said cacheable coherent memory space of said first data processing system~~; and

~~wherein said uncacheable remote access performed by said bridge comprises writing data to said memory of said first data processing system for incorporation into said cacheable coherent memory space of said first data processing system;~~

~~wherein said data written by said bridge during said uncacheable remote access participates in a cacheable coherent memory protocol in said cacheable coherent memory space;~~

~~wherein said data written by the bridge during said uncacheable remote access is processed by said first data processing system to convert the data to conform to a cacheable coherent memory protocol in the cacheable memory space and wherein the converted data in said cacheable coherent memory space is accessed by an agent subsequent to said conversion; and~~

~~wherein the remote access by said bridge to perform said data write is performed in accordance with a set of predetermined ordering rules forming a second node~~, in which the second data processing system includes a second bridge and respective interfaces couple the first node to the second node, wherein when the second node receives a request from an external source to access a coherent fabric of the memory, the second bridge identifies the memory as located in a remote node and transfers the request as an

uncacheable access request to the first node so that the uncacheable access request does not access the coherent fabric in the second node, and when the first bridge receives the uncacheable access request, the first bridge identifies the memory as a local access in the first node and processes the uncacheable access request from the second node as a coherent access to access the coherent fabric of the memory in the first node.

2. (canceled)

3. (currently amended) The system of claim 1, wherein ~~said uncacheable remote access performed by said bridge comprises reading data from said cacheable coherent memory space of said first data processing system~~ the request from the external source is a read or a write request to access the memory.

4-5. (canceled)

6. (currently amended) The system of claim 1, wherein ~~said remote~~ the access by said the second bridge to a location of the memory and said a subsequent access by said another agent to access the location of the memory conforms to a producer-consumer protocol, wherein ~~said the second bridge corresponds to the a producer and said the another agent corresponds to the a consumer of said the producer-consumer protocol.~~

7. (currently amended) The system of claim 6, wherein ~~said data written by said the second bridge to access the memory comprises a payload and a flag, with said flag and said payload both residing in a node defined by said first data processing system.~~

8-9. (canceled)

10. (currently amended) A method for managing coherent data access in through multiple data processing devices using common data paths nodes, comprising:

establishing a cacheable coherent memory space in a local memory of a first data processing system that forms a first node, and in which the first data processing system also includes a first bridge; and

~~accessing said cacheable coherent memory space with a second data processing system communicatively coupled to said first data processing system, said second data processing system comprising at least one bridge;~~

~~wherein said bridge performs an uncacheable remote access to said cacheable coherent memory space of said first data processing system;~~

~~wherein said uncacheable remote access performed by said bridge comprises writing data to said memory of said first data processing system for incorporation into said cacheable coherent memory space of said first data processing system;~~

~~wherein data written by said bridge during said uncacheable remote access participates in a cacheable coherent memory protocol in said cacheable coherent memory space;~~

~~wherein said data written by the bridge during said uncacheable remote access is processed by said first data processing system to convert the data to conform to a cacheable coherent memory protocol in the cacheable memory space and wherein the converted data in said cacheable coherent memory space is accessed by an agent subsequent to said conversion; and~~

~~wherein the remote access by said bridge to perform said data write is performed in accordance with a set of predetermined ordering rules~~

receiving at a second node a request from an external source to access a coherent fabric of the memory, wherein the second node is formed of a second data processing system that includes a second bridge;

identifying in the second node that the memory is located in a remote node;

converting the request to access the memory as an uncacheable access request to the first node in the second bridge, so that the uncacheable access request does not access the coherent fabric in the second node;

transferring by the second bridge the uncacheable access request to the first node;

receiving by the first bridge the uncacheable access request from the second node through respective interfaces;

identifying the uncachable access request as a local access to the memory in the first node;

processing the uncachable access request from the second node as a coherent access to access the coherent fabric of the memory in the first node; and

accessing the coherent fabric of the memory in the first node in response to the request from the external source to access the memory, but in which the access is processed without accessing the coherent fabric in the second node.

11. (canceled)

12. (currently amended) The method of claim 10, wherein ~~access performed by said bridge comprises reading data from said cacheable coherent memory space of said first data processing system~~ the access request from the external source is a read access or a write access to the memory.

13-14. (canceled)

15. (currently amended) The method of claim 10, wherein ~~said remote~~ the access by said the second bridge to a location of the memory and said a subsequent access by said another agent to access the location of the memory conforms to a producer-consumer protocol, wherein ~~said the second bridge corresponds to the a producer and said the another agent corresponds to the a consumer of said the producer-consumer protocol.~~

16. (currently amended) The method of claim 15, wherein ~~said data written by said the second bridge to access the memory comprises a payload and a flag, with said flag and said payload both residing in a node defined by said first data processing system.~~

17-18. (canceled)